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**Upper Rio Grande Basin Water Operations Review and EIS**  
**ARCHIVE FORM (6/18/01)**

No.	<b>RIP-111</b>	Keep Confidential?	
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**Author:** New Mexico Department of Game and Fish (NMDGF)

**Date:** 2004

**Title:** Biota Information System of New Mexico Species Account 040384 – American Peregrine Falcon.  
New Mexico Department of Game and Fish.

**Publication:** BISON-M Animal Lists (online)

**Organization:** New Mexico Department of Game and Fish (NMDGF)

**Organization Location:** \_\_\_\_\_

**Document Location:** Available at <http://nmnhp.unm.edu/bisonm/bisonquery.php> (also in SWCA Library)

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| <input type="checkbox"/> Surface Water    | <input type="checkbox"/> Public Involvement                                 |
| <input type="checkbox"/> Groundwater      | <input checked="" type="checkbox"/> Other (specify): <u>T&amp;E Species</u> |

**Key Words:** American peregrine falcon

**Completed By (Name):** Janelle Harden; SWCA Albuquerque **Date:** 7 June 2004

**Address:** 7001 Prospect Place NE, Ste. 100, Albq. NM 87110 **Phone:** (505) 254-1115

**Comments/Summary:**



040384

American Peregrine Falcon

*Falco peregrinus anatum*

Ref # 503



## Biota Information System Of New Mexico BISON

version 1/2004

BISON was developed for biologists by The New Mexico Department of Game & Fish, and The Fish & Wildlife Information Exchange, Conservation Management Institute, VA Tech, Blacksburg, VA. Other contributing agencies include the US Bureau of Land Management, US Forest Service, US Fish and Wildlife Service, US Bureau of Reclamation, US Army Corps of Engineers, New Mexico State Land Office, and New Mexico Natural Heritage Program (U of NM).

BISON contains accounts for all vertebrate and many invertebrate species of wildlife occurring in New Mexico and Arizona (including all threatened, endangered and sensitive species). Many accounts are incomplete although new information is being added continuously. Errors do occur. Users are cautioned to refer back to the original cited source to assess completeness and correctness before using the information. The database is completely searchable when installed on stand-alone personal computers, and limited searches are available at <http://nunnbp.unm.edu/bisonx/bisonquery.php>. Accounts can be accessed directly at <http://www.cmiweb.org/states/>. Web updates are intermittent, not continuous, therefore some dynamic information such as legal status may not be absolutely current.

Numbers listed under "References" and numbers enclosed by asterisks (e.g., \*43\*) refer to reference numbers in the last section of the account (i.e., REFERENCES) and indicate the source of the information.

If you have questions or want to report errors, please contact Leland Pierce, New Mexico Department of Game and Fish, Santa Fe, NM; e-mail [ljspierce@state.nm.us](mailto:ljspierce@state.nm.us).

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Ref 502 2131

**Upper Rio Grande Basin Water Operations Review and EIS**  
**ARCHIVE FORM (6/18/01)**

No.	<b>RIP-110</b>	Keep Confidential?
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**Author:** New Mexico Department of Game and Fish (NMDGF)

**Date:** 2004

**Title:** Biota Information System of New Mexico Species Account 030259 - New Mexico Garter Snake. New Mexico Department of Game and Fish.

**Publication:** BISON-M Animal Lists (online)

**Organization:** New Mexico Department of Game and Fish (NMDGF)

**Organization Location:** \_\_\_\_\_

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**Relevant Topics (Check All Applicable):**

- |   |   |
|---|---|
| <input type="checkbox"/> Purpose and Need | <input type="checkbox"/> Earth Resources (Geology, Soils)                   |
| <input type="checkbox"/> Baseline Data    | <input type="checkbox"/> Water Quality                                      |
| <input type="checkbox"/> Alternatives     | <input checked="" type="checkbox"/> Riparian and Wetlands                   |
| <input type="checkbox"/> Climate          | <input type="checkbox"/> Aquatic Systems                                    |
| <input type="checkbox"/> Water Operations | <input type="checkbox"/> Cultural Resources                                 |
| <input type="checkbox"/> URGWOM           | <input type="checkbox"/> Land Use   |
| <input type="checkbox"/> Facilities       | <input type="checkbox"/> Aesthetics   |
| <input type="checkbox"/> Geomorphology    | <input type="checkbox"/> Socioeconomics                                     |
| <input type="checkbox"/> Sedimentation    | <input type="checkbox"/> Environmental Justice                              |
| <input type="checkbox"/> Hydrology        | <input type="checkbox"/> Agriculture  |
| <input type="checkbox"/> Hydraulics       | <input type="checkbox"/> Recreation   |
| <input type="checkbox"/> Surface Water    | <input type="checkbox"/> Public Involvement                                 |
| <input type="checkbox"/> Groundwater      | <input checked="" type="checkbox"/> Other (specify): <u>T&amp;B Species</u> |

**Key Words:** New Mexico garter snake

**Completed By (Name):** Janelle Harden, SWCA Albuquerque **Date:** 7 June 2004

**Address:** 7001 Prospect Place NE, Ste. 100, Albq NM 87110 **Phone:** (505) 254-1115

**Comments/Summary:**

040384

American Peregrine Falcon

*Falco peregrinus anatum*

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## Taxonomy

<b>Species ID</b>	040384
<b>Name</b>	Falcon, Peregrine, American
<b>Other Common Names</b>	Peregrine Falcon Halcon Peregrino (Hispanic)
<b>Category</b>	04 Birds
<b>Elcode</b>	ABNKD06071
<b>AOU Code</b>	3560
<b>BLM Code</b>	FAPE
<b>Phylum</b>	Chordata
<b>Subphylum</b>	Vertebrata
<b>Class</b>	Aves
<b>Subclass</b>	Neornithes
<b>Suborder</b>	Falcones
<b>Order</b>	Falconiformes
<b>Family</b>	Falconidae
<b>Genus</b>	Falco
<b>Species</b>	peregrinus
<b>Subspecies</b>	anatum
<b>Account</b>	Single Ssp, < full species
<b>Authority</b>	(Tunstall, 1771; subsp: Bonaparte))
<b>Scientific Name</b>	Falco peregrinus anatum
<b>Taxonomic Order</b>	6090

## References

02, 45, 46, 47, 96

## Comments

SUBSPECIES AUTHORITY IS BONAPARTE \*02\* NEW MEXICO: [See record 040385 for Arctic peregrine falcon] F. p. anatum (Bonaparte) and F. p. tundrius (White) are the subspecies recognized in New Mexico. \*47\* Tribe Falconini \*45\*

## Status

Status Code	Status Translation	References
109	CITES Appendix I (Import & Export Permit)	84
111	Federal: Recovery Plan Approved	43
116	Federal: Delisted	132
121	Federal: Migratory Bird Treaty Act	41
143	USFS Sensitive: Region 3 (NM,AZ)	44
151	Mexico: Threatened	85
155	Mexico: See Comments	75, 85
202	State NM: Threatened	104, 114
208	State NM: Provides full protection	48
223	State NM: Not a Game Species	48
252	State AZ: FORMER STATUS; Candidate	70
255	State AZ: Species of Special Concern	101
260	State UT: Endangered	71
270	State OK: State Endangered Species	72
280	State TX: State Endangered Species	74
305	State CO: Threatened	117
503	Migratory: Seasonal movement	41
506	Neotropical Migrant: All Winter S. of U.S.	65, 77
700	TRADITIONAL CULTURAL IMPORTANCE	83
727	Navajo Tribes: Threatened (G3)	83
804	Heritage Global: Apparently Secure (G4)	99
812	Heritage NM: Imperiled in NM (S2)	119
823	Heritage AZ: Uncommon or Restricted in AZ (S3)	85
839	Heritage Ranking: Taxon Tracked by Heritage Program	85, 103
840	Heritage Ranking: See comments	85, 119, 120
999	See Comments	

Concern Code	Concern Translation	References
110	CONCERN: Low numbers	118
200	CAUSE: Habitat loss/degradation/fragmentation	122
270	CAUSE: Pollution/Contaminants	118ü122
999	SEE COMMENTS	

## Comments on Status

[See record 040385 for Arctic peregrine falcon] 1970: Federal Status: "American" subspecies, F. p. anatum: Endangered (Jun. 2, 1970) (NMDGF, 1988) \*38\*. 1970: Federally Endangered: 35 FR 16047, October 1970; 35 FR 8495, June 2, 1970). Critical habitat had not been defined (Oklahoma Coop. Ext., 1993) \*72\*. 1984: The Federal recovery plan was written in 1984, with an Addendum completed in 1994, though never released and never reviewed (AGFD, 11/95) \*94\*. 1991: NOTE - Coding for Neotropical Migrant Birds. Breeding: 1 -Breeds only north of tropics, 2 - Breeds mostly north of tropics, 3 - reeds both north and south of tropics, and 4 - Breeds mostly in tropics. Wintering: 1 - Winters in tropics only, 2 - Winters mostly in tropics, 3 - Winters in tropics and north of tropics , and 4 - Winters mostly north of tropics. The peregrin falcon (Falco peregrinus) breeds only north of the tropics and winters in

the tropics and north of the tropics (SWCA, 1991) \*136\*. 1992: Both import and export permits were required for international trade of peregrine falcons (*Falco peregrinus*) (CITES, 1992) \*84\*. 1993: American peregrine falcon remained on the Federal Endangered list in 1993 (USFWS, 1990) \*49\*. 1994: The American peregrine falcon (subspecies *anatum*) was Federally Endangered throughout its range (50 CFR, 1994) (USFWS, 1994) \*79\*. 1994: Critical habitat was designated in part 17.95(b) of the Endangered Species Act, but not in New Mexico (USFWS, 1994) \*79\*. 1995: *Falco peregrinus anatum* was listed under the Natural Heritage Global Rank "G4T3" ("G4" = [species listed] "Apparently Secure"; "T3" = "Uncommon or Restricted") (AGFD, 1995) \*85\*. 1995: The subspecies, *Falco peregrinus anatum*, was being "Tracked": data were being actively accumulated and entered into computerized and manual files by the Heritage Program (AGFD, 1995) \*85\*. 1994/1995/1996: The American peregrine falcon was Federally-listed as Endangered, but downlisting to threatened (Category 2) appeared warranted at this time and was supported by the Department (NMDGF); based on available data. However, delisting was not supported by the Department (NMDGF) (See reference for delisting and down-listing criteria) (NMDGF, 1994) \*95\*; (NMDGF, 1995) \*89\*; (NMDGF, 1996) \*98\*. 1996: The complete Natural Heritage Global Rank for the subspecies *Falco peregrinus anatum* was listed "G4T4" (CNHP, 1996) \*99\*. 1996: The subspecies, *Falco peregrinus anatum*, was listed by a New Mexico Natural Heritage Program list as "Tracked": data were being actively accumulated and entered into computerized and manual files by the Heritage Program (NMNHP, 1996) \*103\*. 1997: The subspecies *Falco peregrinus anatum* was listed under the Natural Heritage Global Rank "G4T4" ("G4" = [full species listed] "Apparently Secure"; "T4" = [subspecies listed] "Apparently Secure") on August 24, 1995 (NMNHP, 1997) \*119\*. 1997: The full species *Falco peregrinus* was listed under the Natural Heritage Global Rank "G4" ("G4" = "Apparently Secure") on June 13, 1994 (NMNHP, 1997) \*119\*. 1999: As of August 25, 1999, the American peregrine falcon is no longer an endangered or threatened species pursuant to the Endangered Species Act of 1973. This delisting is based on available data indicating that this species has recovered following restrictions on organochlorine pesticides in the United States and Canada, and following the implementation of successful management activities. This action removes the peregrine falcon throughout its range, thereby removing all protections provided by the act. It also removes the designation of "endangered due to similarity of appearance" for any free-flying peregrine falcons within the 48 conterminous United States (Federal Register, 1999) \*132\*. NEW MEXICO 1975: New Mexico Status: Endangered (group 1), first listed Jan. 24, 1975 (NMDGF, 1988) \*38\*. 1994, Biologist's Recommendation: Downlisting the species' New Mexico state-listing to Group 2 was recommended at this time, and that the listing should apply to all individuals of the species (NMDGF, 1994) \*95\*. 1996, Biologist's Recommendation: The NMDGF recommended downlisting the species to Threatened, and that this listing should apply to all individuals of the species. It was also recommended that the Department (NMDGF) should continue to work cooperatively with other agencies to systematically monitor the breeding population for occupancy and productivity, and continue to work with land management agencies to identify and protect suitable breeding habitat (NMDGF, 1996) \*98\*. 1996: The recommended change in legal, New Mexico state, status for the peregrine falcon (*Falco peregrinus*) was passed by commission. The species status was downgraded from Endangered to Threatened (NMDGF, 1996) \*104\*. 1997: The full species *Falco peregrinus* and the subspecies *F.p. anatum* were listed under the Natural Heritage New Mexico State Rank "S2B,S3N" ("S2" = "Imperiled", "B" refers to the breeding population; "S3" = "Rare or Uncommon", "N" refers to the nonbreeding or migratory population; two codes are necessary because certain birds occur in different biological capacities) on February 8, 1996 (NMNHP, 1997; Altenbach, 1998) \*119,120\*. ARIZONA 1995: The subspecies, *Falco peregrinus anatum*, was listed under the Natural Heritage Arizona State Rank "S3" ("S3" = "Uncommon or Restricted"). The species, *F.peregrinus*, was listed in the same manner (AGFD, 1995) \*85\*. 1996: The peregrine falcon (*F.peregrinus*) was listed as an Arizona Species of Special Concern (AGFD, 1996) \*101\*. 1997: Due to the ban on DDT in the US, peregrine populations are now recovering rapidly in the US; however, the use of DDT and other harmful pesticides in Mexico and South America is still a major concern (Haynes and Schuetze, 1997) \*118\*. COLORADO 1996: The American Peregrine Falcon was listed as State Threatened in Colorado (CNHP, 1996) \*117\*. NAVAJO 1994: The species, Peregrine falcon (*Falco peregrinus*), was listed as "Threatened/G3" by the Navajo Nation (Navajo Endangered Species List, 1994) \*83\*. MEXICO 1991: *Falco peregrinus* was listed both rare, and endangered in Mexico (Mexico Ministry of Soc. Devel., Official Database, 1991) \*75\*. 1995: The subspecies, *Falco peregrinus anatum*, was listed "Threatened" in Mexico. The species, *F.peregrinus*, was listed in the same manner (AGFD, 1995) \*85\*. UTAH 1997: Peregrines nest on cliffs in association with riparian wetland habitats statewide, except in the western basin and range. The species is threatened by environmental contaminants and loss of habitat. While the Colorado Plateau portion of the falcons' population is

currently recovering, the northern Wasatch portion has not reestablished a self-sustaining population (UDWR, 1997) \*122\*.

Comments on Trends

1940-1988: Populations of the species, *Falco peregrinus*, in North America and Europe declined drastically beginning in the 1940's, coincidentally with the spread of DDT as an insecticide (Hickey and Anderson 1968). This chemical was ingested by the prey of peregrines, and thus it also entered the falcons. There it caused eggshell thinning and reproductive failure, resulting in declines or even losses in populations. Peregrines in New Mexico also appear to have been affected by DDT and related chemicals, perhaps primarily from the contamination of prey in Latin America (Hubbard 1985). Peregrine declines or losses in New Mexico appear to have bottomed out by the late 1970's, and at the time of publication the rather small breeding population appeared to be stable (NMDGF, 1988) \*38\*. 1950-1988: Nationwide population declines in the 1950s and 1960s seemed to have reversed in years leading up to this publication. Apparent population increases were noted in Arizona since at least 1980. The effects of pesticides appeared to have decreased north of Mexico, and there were few threats to much of the peregrine's remote, cliff-face habitat (AGFD, 1988) \*70\*. 1979-1997: Historical data indicate that a normal peregrine population occupies at least 85% of available territories. In New Mexico, occupancy of territories by any peregrine had increased since 1979; this occupancy averaged 82% during 1992-96 compared to 48% during 1979-83. Productivity of adult pairs increased substantially from 1979 to 1987, but has decreased by 29% since 1987, averaging 1.69 fledged young per adult pair during 1992-96. Productivity had fallen to near the estimated minimal maintenance level, and further decline would lead to a decline in the population (Johnson and Williams, 1997) \*107\*. 1993: Banning the use of DDT improved the nesting success of wild peregrine falcons. The recovery plan was revised in 1984. Much of the recovery progress was due to captive breeding and reintroductions (OCES, 1993) \*72\*. 1993-1995: For the three-year period 1993-95, average annual occupancy of known peregrine territories in New Mexico, by any peregrine, was 80.9% and occupancy by adult pairs was 71.2%. Productivity in 1995 was 1.49 young per adult pair, which was judged marginally sufficient to maintain the population; productivity had shown a steadily declining trend in years leading up to this publication, down from 2.05 young per adult pair in 1990 (NMDGF, 9/95) \*89\*. 1996: The Department (NMDGF) was encouraged by the gradually increasing occupancy of breeding sites in years recent to this publication; however, occupancy had not yet achieved the level of a healthy, self-sustaining population. In New Mexico, occupancy rates were approaching 80% (Johnson, 1995), leading the Department to propose downlisting from Endangered to Threatened status. Of concern, however, was a steady decline in productivity by the species in New Mexico and elsewhere in the southwest United States -- New Mexico data demonstrated a statistically significant decline between 1988 and 1996, down 34% since 1988 (Johnson 1995) (NMDGF, 1996) \*98\*. 1997: "Hacking", a reintroduction process whereby young birds bred in captivity are released into the wild, has helped peregrine populations become re-established in the U.S. after serious declines in the 1950's and 1960's due to DDT contamination (Haynes and Schuetze, 1997) \*118\*. 2001: In New Mexico, occupancy rates by any peregrine averaged 83% during 1997-2001(although the rate declined to 82% in 2001); occupancy by adult pairs achieved 76% in 2001 (Johnson 2001) \*139\*. ARIZONA Nationwide population declines in the 1950' and 1960's seemed to have been reversed. At the time of this publication the Arizona population (of *F.p.anatum*) stood at more than 200 known eyries, a few of which required seasonal closures for protection (AGFD, 1996) \*101\*. Reasons for Concern - List Endangered: Due to the ban on DDT in the U.S., peregrine populations are now recovering rapidly in the U.S.; however, the use of DDT and other harmful pesticides in Mexico and South America still a major concern (Haynes and Schuetze, 1997) \*118\*.

Distribution

State	References
NM: Extant	38
AZ: Extant	85
CO: Species occurs(ed)	99

TX: Species occurs(ed) 129  
 OK: Species occurs(ed) 72

### New Mexico County Occurrence

County	Data	Season	Regular	Abundance	Behavior	References
New Mexico			Regular			88
New Mexico	Reported				Breeds	130
Bernalillo	Reported	Winter	Occasional			108
Bernalillo	Reported	Sp & F		Rare	Transient	108
Bernalillo						38, 43
Catron		Summer			Breeds	42
Catron						38, 43
Chaves		Sp & F		Rare		56
Chaves						38, 43
Cibola						38, 43
Colfax						57, 38, 43
Curry				Rare		38, 43
De Baca				Rare		38, 43
Dona Ana		Yr-Rnd		Rare		51
Dona Ana						38, 43
Dona Ana				Rare	Transient	76
Eddy		Sp & F		Uncommon		55
Eddy						38, 43
Grant						38, 43
Guadalupe				Rare		38, 43
Guadalupe		Summer			Transient	90
Harding				Rare		38, 43
Hidalgo						38, 43
Hidalgo		Summer			Breeds	87
Lea				Rare		38, 43
Lincoln						38, 43
Lincoln		Yr-Rnd		Rare		113
Los Alamos						38, 43
Los Alamos					Breeds	121
Luna						38, 43
McKinley						38, 43, 68
Mora						38, 43
Otero						38, 43
Otero				Rare	Transient	76
Quay				Rare		38, 43
Rio Arriba				Rare	Breeds	38, 43, 81
Rio Arriba	Reported	Summer		Rare		128
Roosevelt				Rare		38, 43
Sandoval		Yr-Rnd		Rare		50

Sandoval					38, 43
San Juan	Reported	Summer		Breeds	116
San Juan					38, 43, 112
San Miguel		Sp & F	Uncommon		54
San Miguel					38, 43
Santa Fe					38, 43
Sierra					38, 43
Socorro		Spring	Rare		52
Socorro		Sp-Su		Transient	58
Socorro		F-W	Uncommon		52
Socorro		F-W		Transient	58
Socorro					53, 38, 43
Taos					38, 43
Torrance		Fall			BAND*3
Torrance					38, 43
Union			Rare		38, 43
Valencia					38, 43

### Arizona County Occurrence

County	Data	References
Apache		106
Cochise		106
Coconino		106
Gila		106
Graham		106
Greenlee		106
La Paz		106
Maricopa		106
Mohave		106
Navajo		106
Pima		106
Pinal		106
Santa Cruz		106
Yavapai		106

### Comments on Distribution

#### GENERAL DISTRIBUTION

1950: The species (*Falco peregrinus*) breeds (or bred) throughout much of North America, as well as in South America, Eurasia, Australia, Africa, and Oceania (A.O.U. 1983). The subspecies *F. p. anatum* breeds (or bred) south of the arctic tundra region of North America, southward to Mexico (Sea of Cortez region and the Central Plateau) and the southern Appalachian Mts.; in winter and migration it occurs southward to the Caribbean region and South America (Friedmann, 1950).

1988/1993: This species breeds in North America and spends their nonbreeding

time primarily south of the United States (Williams, 1988); (Williams, 1993) \*66,77\*.

1992/1993: This species winters south of the Mexican border (MNMB, 1992); (Williams, 1993) \*65,77\*.

1993: The race *Falco peregrinus anatum* at one time nested over much of North America. They continue only in scattered areas across their historic range. Some migrate through, and occasionally winter in Oklahoma (OCES, 1993) \*72\*.

#### NEW MEXICO

1976: *Falco peregrinus* casually occur near Archuleta, San Juan Valley, where one was flushed from a sandstone cliff on June 29, 1972. Peregrine falcons were listed as breeders in this area by Hubbard (1970). One peregrine falcon was seen near Navajo Damsite on July 21, 1960, according to White and Behle (1961), two more were spotted in the same area on June 22, 1967 by A.P. Nelson (NMOS Field Notes). These birds occupy non-riparian habitats exclusively or nearly so in the breeding season, except for drinking and bathing (Schmitt, 1976) \*116\*.

1978: Peregrine falcons are summer residents or year-round residents in montane areas almost statewide in New Mexico, and are considered rare to uncommon and local. They migrate and winter almost statewide and are rare to uncommon and local (Hubbard, 1978) \*42\*.

1978: The American Peregrine Falcon occurs in all New Mexico mountain ranges (Hubbard, 1978) \*42\*.

1988: The subspecies *F. p. anatum* breeds very locally in mountainous areas, and it occurs in migration and winter essentially statewide -- but mainly west of the eastern plains (Hubbard 1978, 1985). Key habitat areas are nest sites (eyries) and their vicinities, including both those that are currently occupied and historic ones that are still suitable for the species (NMDGF, 1988) \*38\*.

1989: American peregrine falcons are occasional, migrant in the spring or fall, winter visitors, and found in woodlands and sandstone cliffs at El Malpais National Monument and National Conservation Area (Hvenegaard, 1989) \*126\*.

1992: The peregrine falcon (*Falco peregrinus*) was known from earlier years to have nested in Los Alamos, but there was no evidence of breeding in a 1984 to 1988 field survey (Travis, 1992) \*121\*.

1992: Peregrine falcons are occasional during the spring (March to May), summer (June to Aug.), and fall (Sept. to Nov.) at Sevilleta National Wildlife Refuge (USFWS, 1992) \*127\*.

1993: Regular breeder in New Mexico (Williams, 1993) \*77\*.

1993: Peregrine falcons are listed rare migrants at the White Sands National Monument of Dona Ana and Otero counties (WSNM, 1993) \*76\*.

1995: Peregrine falcons are migrants at the Santa Rosa Reservoir (Guadalupe County, NM). A hunting female interrupted the shorebird count at Y Tank on 23 August 1994, but did not capture prey (Stahlecker, 1995) \*90\*.

1995: The species, *Falco peregrinus*, occurs almost worldwide. In New Mexico, the American subspecies, *F.p.anatum*, breeds locally in mountain areas and migrates essentially statewide; the tundra subspecies, *F.p.tundrius*, is a

very rare migrant through the state (NMDGF, 1995) \*89\*.

1995: Peregrine falcons of Fort Bliss are very rare in September and October, and from the middle of March to the middle of May (Cons. Div., 1995) \*124\*.

1995: Peregrine falcons are uncommon permanent residents that breed at the Gila National Forest (Zimmerman, 1995) \*123\*

1995: Peregrine falcons are rare transients in the Sacramento Mountains of the Lincoln National Forest (USFS, 1995) \*125\*.

1996: The peregrine falcon (*F.peregrinus*) is known to exist or has the potential to exist on Los Alamos National Laboratory lands, NM (Hinojosa, 1996) \*102\*.

1996: The peregrine falcon was listed as a rare species, occurring mainly in the breeding months (March-August), at the White Sands Missile Range (Kamees and Burkett, 1996) \*105\*.

1996: Peregrine falcons are found on the B-Square Ranch, San Juan County, NM. (Reeves, 1996) \*112\*.

1996: Peregrine Falcons are a rare transient on Holloman Air Force Base from April to May and from July to October (MVAS, 1996) \*133\*.

1997: The American peregrine falcons are permanent residents and they breed at the Gray Ranch, Hidalgo county, New Mexico. They occur in the upper montane areas (higher Animas Mountains, pine-fir belt), lower montane areas (foothills and canyons below 7000ft), desert scrubs (dominated by mesquite, yucca and cactus) and in the grassland areas (expansive open areas mostly in the SW area) (Black, 1997) \*78\*.

#### ARIZONA

1988: The subspecies, *F.p.anatum*, and perhaps *tundrius* occur statewide as migrant, transient and/or (rarely) wintering individuals. Only *anatum* breeds here, on selected isolated cliff ledges statewide. There are few threats to much of the peregrine's remote, cliff-face habitat (AGFD, 1988) \*70\*.

1994: Peregrine falcons (*Falco peregrinus* -- subspp. not stated) occur on the Apache-Sitgreaves, Coconino, Kaibab, Prescott, and Tonto National Forests of Arizona (Patton, 1994) \*80\*.

1995: The peregrine falcon was listed as a rare transient (spring and fall) in the Sandia and Manzanita Mountains, within the Cibola National Forest (Bernalillo County). It is also an occasional winter resident (Schwarz, 1995) \*108\*.

1996: The subspecies *anatum* and perhaps *tundrius* occur statewide as migrant, transient, and/or wintering individuals. Only *anatum* breeds here (statewide) (AGFD, 1996) \*101\*.

1997: Peregrine falcons now breed anywhere in Arizona in suitable habitat of large high cliffs such as the Mogollon Rim, Grand Canyon, and the Colorado Plateau, where sufficient prey and water are available (Haynes and Schuetze, 1997) \*118\*.

1999: Peregrine falcons are uncommon summer residents and uncommon transients at Mormon Lake Arizona (Coconino County, AZ) (NAAS, 1999) \*134\*.

## TEXAS

1993: Range of the species is in: the Edwards Plateau, LLano Uplift, Rolling Plains, High Plains, Trans Pecos regions (TPWD, 1993) \*74\*.

**Other Distribution - New Mexico****Land Unit**

FOREST SERVICE LANDS, NEW MEXICO  
CARSON NATIONAL FOREST  
CAMINO REAL/QUESTA DISTRICT, USFS  
CIBOLA NATIONAL FOREST  
SANDIA DISTRICT, USFS  
GILA NATIONAL FOREST  
LINCOLN NATIONAL FOREST  
SANTA FE NATIONAL FOREST  
MILITARY LANDS, NEW MEXICO  
FORT BLISS (NM PORTION)  
HOLLOMAN AIR FORCE BASE  
WHITE SANDS MISSILE RANGE: CURRENT  
MCGREGOR RANGE  
TRIBAL LANDS, NEW MEXICO  
ZUNI  
US NATIONAL WILDLIFE REFUGES, USFWS, NEW MEXICO  
BITTER LAKE NWR  
BOSQUE DEL APACHE NWR  
LAS VEGAS NWR  
MAXWELL NWR  
SAN ANDRES NWR  
SEVILLETA NWR  
NEW MEXICO DEPARTMENT OF GAME & FISH LANDS  
WILDLIFE AREAS, NMDGF  
RIO CHAMA WILDLIFE AREA, NMDGF  
WATERFOWL AREAS, NMDGF  
LADD S. GORDON WATERFOWL AREA, NMDGF  
THE NATURE CONSERVANCY LANDS  
GRAY RANCH, (Formerly TNC)  
US NATIONAL PARK SERVICE LANDS  
BANDELIER NM, NPS  
CARLSBAD NP, NPS  
WHITE SANDS NM, NPS  
NEW MEXICO STATE PARKS  
SANTA ROSA LAKE SP  
MISCELLANEOUS LAND, NEW MEXICO  
LOS ALAMOS NATIONAL LABORATORY LANDS  
B-SQUARE RANCH (SAN JUAN COUNTY)  
WILDLANDS ECOREGIONS - SOUTHWESTERN U.S.

## Habitat Associations

RIPARIAN  
TERRESTRIAL  
AERIAL  
MONTANE  
LOWLANDS

92  
67?, 01?, 38?  
67?, 01?, 38?  
92, 93  
92, 93

### Gap Vegetation Type

Gap Vegetation Type	Season	Gap Importance	References
TUNDRA			
TUNDRA	Sp-Su-F	Casual Use	92
FOREST			
SPRUCE-FIR	Sp-Su-F	Important	92
SPRUCE-FIR	Yr-Rnd	Casual Use	93
ASPEN	Sp-Su-F	Important	92
ASPEN	Yr-Rnd	Casual Use	93
DOUGLAS/WHITE FIR mixed conifer	Sp-Su-F	Important	92
DOUGLAS/WHITE FIR mixed conifer	Yr-Rnd	Important	93
PONDEROSA PINE	Yr-Rnd	Important	93
CHIHUAHUA/APACHE PINE	Yr-Rnd	Important	93
BRISTLECONE/LIMBER PINE	Yr-Rnd	Important	93
PINYON/JUNIPER closed	Yr-Rnd	Important	93
JUNIPER SAVANNA	Yr-Rnd	Casual Use	93
BORDER PINYON/ALLIGATOR JUNIPER	Yr-Rnd	Casual Use	93
REDBERRY JUNIPER open	Yr-Rnd	Casual Use	93
SILVERLEAF/NETLEAF OAK closed	Yr-Rnd	Casual Use	93
ENCINAL OAK open/gray/emory/white oak	Yr-Rnd	Casual Use	93
SCRUB			
Mt SCRUB mahogany/gambel/wavyleaf oak	Yr-Rnd	Casual Use	93
CHAPARRAL toumey/scrub/live oak/manzan	Yr-Rnd	Casual Use	93
GREAT BASIN sagebrush	Yr-Rnd	Casual Use	93
GREAT BASIN rabbitbrush/winterfat/etc	Yr-Rnd	Casual Use	93
CHIH DESERT creosotebush	Yr-Rnd	Casual Use	93
CHIH DESERT tarbush/mesquite/ocotillo	Yr-Rnd	Casual Use	93
GRASS			
SHORT GRASS STEPPE gramma+buffalograss	Yr-Rnd	Casual Use	93
MID-GRASS PRAIRIE sideoats/wheatgrass	Yr-Rnd	Casual Use	93
CHIH DESERT GRASSLAND black grama	Yr-Rnd	Casual Use	93
CHIH DESERT GRASSLAND tabosa/sacaton	Yr-Rnd	Casual Use	93
RIPARIAN			

MONTANE RIPARIAN cottonwd/alder/willow	Yr-Rnd	Casual Use	93
LOWLAND RIPARIAN cottonwd/sycamore	Yr-Rnd	Casual Use	93
MARSH rush/bulrush/sedge/cattail	Sp-Su-F	Important	92
BARREN			
BARREN: ROCK OUTCROP	Sp-Su-F	Important	92
URBAN			
URBAN: NON-VEGETATED	F-W-Sp	Casual Use	92
AQUATIC			
AQUATIC: BASIN/PLAYA	Yr-Rnd	Important	92

## Land Use/Land Cover Associations

LU/LC	References
Urban or Built-up Land	67?, 66?, 23?, 27?, 28?, 38?, 69?
Agricultural Land	67?, 66?, 23?, 27?, 28?, 38?, 69?
Cropland and Pasture	67?, 66?, 23?, 27?, 28?, 38?, 69?
Rangeland	67?, 66?, 23?, 27?, 28?, 38?, 69?
Herbaceous Rangeland	67?, 66?, 23?, 27?, 28?, 38?, 69?
Forest Land	67?, 66?, 23?, 27?, 28?, 38?, 69?
Deciduous Forest Land	67?, 66?, 23?, 27?, 28?, 38?, 69?
Evergreen Forest Land	67?, 66?, 23?, 27?, 28?, 38?, 69?
Mixed Forest Land	67?, 66?, 23?, 27?, 28?, 38?, 69?
Water	67?, 66?, 23?, 27?, 28?, 38?, 69?
Streams and Canals	67?, 66?, 23?, 27?, 28?, 38?, 69?
Lakes	67?, 66?, 23?, 27?, 28?, 38?, 69?
Reservoirs	67?, 66?, 23?, 27?, 28?, 38?, 69?
Wetland	67?, 66?, 23?, 27?, 28?, 38?, 69?
Nonforested Wetland	67?, 66?, 23?, 27?, 28?, 38?, 69?
Barren Land	67?, 66?, 23?, 27?, 28?, 38?, 69?
Bare Exposed Rock	67?, 66?, 23?, 27?, 28?, 38?, 69?
Tundra Land: All Classes	67?, 66?, 23?, 27?, 28?, 38?, 69?

## Comments on Land Use/Land Cover Associations

They are found in Douglas fir, Hemlock-Sitka spruce, redwood, ponderosa pine, larch/white pine, lodgepole pine, fir-spruce, aspen(hardwoods), chaparral, and pinyon-juniper forest types\*69\*.

## National Wetland Inventory Associations

NWI	Class	Special Modifier	Modifier	Lifestage	References
Upland					

## Comments on General Habitat Associations

The effect of fire on peregrine falcon habitats best defined by how it affects their primary prey, other bird species. The California Department of Forestry concluded that peregrine falcons would benefit by chaparral burning if it resulted in

an increase of other birds. Studies conducted on chaparral burning concluded that abundant food was available to raptors immediately following fire because of the vulnerability of prey species due to a cover reduction. Bird species richness and diversity increase in the first few years following fire in chaparral communities (Prescribed Fire and Fire Effects Research Work Unit, 1996) \*135\*. New Mexico: In New Mexico, the breeding territories of peregrine falcons center on cliffs that are in wooded/forested habitats, with large "gulfs" of air nearby in which these predators can forage (Hubbard 1985). The nest sites are typically ledges or potholes, with the 3-4 eggs being laid directly on the bare substrate. The eggs are creamy white, with moderate to very heavy reddish and chestnut speckles and splotches; average egg measurements are 52 x 39 mm (Reed 1965). Incubating birds are generally silent and unobtrusive, and they are easily overlooked. When the young are older or fledged, the adults may boldly react to intruders, including calling sharply with monosyllabic bursts--e.g., kak-kak-kak (Hubbard 1985). Under such conditions, humans should immediately vacate an area and leave the birds in peace \*38\*. Sporadic occurrence in Bernardo and La Joya refuges -- in association with open expanses of water \*58\*. They breed in open habitats from tundra, savanna, and seacoasts to high mountains, also open forest, tall buildings \*66\*. These birds have managed to successfully nest on skyscrapers in large cities where they feed mostly on pigeons \*72\*. COLORADO: NOW PERSIST MAINLY ON MOUNTAIN CLIFFS AND RIVER GORGES \*23\*. PREFERRED HUNTING HABITATS- CROPLANDS, MEADOWS, RIVERBOTTOMS, MARSHES AND LAKES \*23,27\*.

## Food Habits

Trophic	References
GENERAL CARNIVORE-eats animals	118
CARNIVORE-eats vertebrate tissue	118

Lifestage	Food Item Consumed	Part of Food Item
General	Reptilia	Not Specified
General	Squamata	Not Specified
General	Aves	Not Specified
General	Anseriformes	Not Specified
General	Anatidae	Not Specified
General	Apodiformes	Not Specified
General	Apodidae	Not Specified
General	Charadriiformes	Not Specified
General	Charadriidae	Not Specified
General	Scolopacidae	Not Specified
General	Columbiformes	Not Specified
General	Columbidae	Not Specified
General	Passeriformes	Not Specified
General	Hirundinidae	Not Specified
General	Mammalia	Not Specified
General	Chiroptera	Not Specified

## Comments on General Food Habits

Peregrines take virtually all of their prey on the wing, typically after a stoop or dive from above. Prey consists almost entirely of birds, these ranging in size from swallows to ducks and large shorebirds. Jays, woodpeckers, swifts, mourning doves (*Zenaidura macroura*), and pigeons are among the commonly-taken prey species in the state. Normal flight speeds of these falcons are 80-100 kph, but in dives they may reach 450 kph (Brown and Amadon 1968) \*38\*.

1981: The following are prey remains from New Mexico Peregrine Falcon roosts: *Columba fasciata* (band-tailed pigeon), *Columba sp.* (pigeon), *Aeronautes saxatalis* (white-throated swift), *Columbia livia* (domestic pigeon), *Anas clypeata* (shoveler), *Colaptes cafer* (red-shafted flicker), *Nucifraga columbiana* (Clark's nutcracker), *Sturnella sp.* (meadowlark), *Anas cyanoptera* (cinnamon teal), *Limosa fedoa* (marbled godwit), *Numenius phaeopus* (whimbrel), *Scolopacidae Limosa?* (shorebird, possible godwit), *Charadriiformes*, species?, *Chordeiles minor* (common nighthawk), *Hirundinidae*, species? (swallow), and snake (Steadman, 1981) \*131\*. 1997: Peregrines feed mostly on birds such as pigeons, doves, shorebirds, and waterfowl, and also on bats (Haynes and Schuetze, 1997) \*118\*. 2000: A NMDGF Biologist observed a Peregrine Falcon with a Gadwall (duck) kill at Cochiti Lake Dam, NM on two occasions (Watson, 2000) \*137\*.

**References/Lifestage****Reference Numbers**

General

118, 131, 137

**Environmental Associations****Lifestage****Environmental Association**

Breeding Adult	Human Association: Residential houses/chimneys/attics
Breeding Adult	Human Association: Specified in Comments
Breeding Adult	AQUATIC
Breeding Adult	TERRESTRIAL
Breeding Adult	Terrestrial Features: Cliffs/ledges
Breeding Adult	Terrestrial Features: Specified in Comments
Breeding Adult	Grassland: Savannas - Mixed grass and trees
Breeding Adult	Forest Ecotones: Forest/opening (clearing, grassland)
Breeding Adult	See Comments On Environmental Associations
Feeding Adult	TERRESTRIAL
Feeding Adult	Terrestrial Features: Specified in Comments
Feeding Adult	Grassland: Prairies - flat, grassy plain; tall grasses
Feeding Adult	Aquatic/Terrestrial Ecotones: Coniferous/deciduous trees
General	Elevation: 3001-4000 ft. (910 - 1220 m)
General	Elevation: 4001-5000 ft. (1220 - 1520 m)
General	Elevation: 5001-6000 ft. (1520 - 1830 m)
General	Elevation: 6001-7000 ft. (1830 - 2130 m)
General	Elevation: 7001-8000 ft. (2130 - 2440 m)
General	Elevation: 8001-9000 ft. (2440 - 2740 m)
General	Elevation: Specified in Comments
General	Aspect: Specified in Comments
General	Human Association: Specified in Comments
General	Human Association: Tolerates/benefits from human assoc.
General	General Waterbody Type: Rivers
General	General Waterbody Type: Wetlands; marsh, bog, etc.
General	General Waterbody Type: Specified in Comments
General	Aquatic Habitat: Fen; peat soil/very alkaline to mildly acidic
General	Aquatic Habitat: Fresh water marsh; grasses/sedges/rushes
General	Soil Type: Specified in Comments
General	Terrestrial Features: Cliffs/ledges

General	Terrestrial Features: Snags
General	Terrestrial Features: Rock outcrops & Rimrock
General	Terrestrial Features: Canyon/Steep slope
General	Terrestrial Features: Crevice
General	Terrestrial Features: Mesa; high/flat/table-land/sharp slopes
General	Terrestrial Features: Specified in Comments
General	Desert: Desert Scrub
General	Desert: Specified in Comments
General	Grassland: Meadows - Low, moist grassland
General	Grassland: Steppes - Large expanse of dry treeless grassland
General	Veg. Successional Stage: Climax forest (Stable)
General	Veg. Successional Stage: Bare rock
General	AGRICULTURAL CROP: Non-specific
General	Agricultural Crops: Oats
General	Agricultural Crops: Specified in Comments
General	Forest Clearing/opening Size: Specified in Comments

### Comments on General Environmental Associations

New Mexico: Peregrine falcons breed on cliffs usually near water. They are generally found at lower elevations \*42\*. Peregrine falcons are found on rocky, steep cliffs near water. They prefer elevations from 6500 - 8599 ft but may be found from 3500 - 9000 feet \*43\*. Oklahoma: They are most often seen beside rivers or near other large waterbodies. They have managed to successfully nest on skyscrapers in large cities \*72\*. Peregrine falcon uses snags for nesting and perching \*109\*. COLORADO: USUALLY NEST BELOW 9500 FT\*31\*. RARELY NEST ABOVE 8500 FT\*23\*. ASPECT PREFERENCE FOR SOUTHERN EXPOSURE INCREASES WITH LATITUDE\*23\* NEST LEDGE WITH LOOSE SOIL, SAND, OR GRAVEL\*31,32\*. NEED HABITATS EXPOSING AND MAKING PREY VULNERABLE (I.E. CLEARINGS)\*27\* ASSOCIATED WITH HABITATS WHICH CONCENTRATE PREY I.E. STREAMS, PONDS, MARSHES, MEADOWS, GRAIN CROPLANDS, AND HABITATS EXPOSING AND MAKING PREY VULNERABLE I.E. PASTURELAND, MEADOW, GRASSLAND, GORGES, LAKES, AND RESERVOIRS\*27\*

### Comments on Breeding Adult Environmental Associations

They nest in cliff recesses in open country, mountain parklands, or along seacoasts, and also on building ledges in large cities \*67\*. They breed in open habitats from tundra, savanna, and seacoasts to high mountains, also open forest, tall buildings \*66\*. In New Mexico, the breeding territories of peregrine falcons center on cliffs that are in wooded/forested habitats, with large "gulfs" of air nearby in which these predators can forage (Hubbard 1985) \*38\*.

### Comments on Feeding Adult Environmental Associations

They use a wide variety of habitats for foraging, including riparian woodlands, coniferous and deciduous forests, shrublands, and prairies \*67\*.

### References/Lifestage

### Reference Numbers

General	23, 27, 31, 32, 42, 43, 69, 72, 109
Breeding Adult	67, 66, 38
Feeding Adult	67

## Life History

### Description

### Reproduction

### Behavior

### Origin

### Limiting Factors

Pesticide accumulation drove the peregrine to the verge of extinction, and by 1965, fewer than 20 pairs were known west of the Great Plains. Factors that may continue to endanger peregrine populations include pesticide poisoning on the wintering grounds, low breeding densities and reproductive isolation, lack of gene flow between populations, and reduced availability of foraging habitats and avian prey.\*67\*

### Population Attributes

In the days of the use of the insecticide DDT the chemical was ingested by the prey of peregrines, and thus it also entered the falcons. There it caused eggshell thinning and reproductive failure, resulting in declines or even losses of populations. Peregrines in New Mexico also appear to have been affected by DDT and related chemicals, perhaps primarily from the contamination of prey in Latin America (Hubbard 1985) \*38\*. Supporting Bond's (1946) original appraisal, Platt and Enderson (1987) estimated that 600-800 pairs of peregrine falcons nested in the western United States prior to widespread declines. Since 1974, experimental releases of young, primarily through hacking and captive breeding, have increased peregrine numbers in the West, and in 1987, the known number of pairs was nearly 200 (Platt and Enderson 1987) \*67\*. Chemical contamination of the environment remains a threat, as new compounds are developed and applied to the land. In New Mexico, disturbance of nesting pairs is a principal threat (NMDGF, 9/95) \*89\*. For the three-year period 1993-95, average annual occupancy by any peregrine in known New Mexico territories was 80.9% and occupancy by adult pairs was 71.2%. Productivity in 1995 was 1.49 young per adult pair, which is judged marginally sufficient to maintain the population; productivity has shown a steadily declining trend in recent years, down from 2.05 young per adult pair in 1990 (NMDGF, 9/95) \*89\*. ARIZONA In 1983, 54 breeding sites were known in Arizona. A statewide survey was carried out in 1988. Breeding activity was then documented at 181 locations. Occupancy, averaged over a five year period, was recorded at 86 percent. Average number of young per occupied eyrie, over the same period, was 1.3 \*82\*. THE MORTALITY RATE IS 70 PERCENT FOR JUVENILES AND 25 PERCENT FOR ADULT, BUT PROBABLY BIASED UPWARDS DUE TO SHOOTING. NATURAL RATES ARE PROBABLY CLOSER TO 50-55 FOR JUVENILES AND 20 TO 25 PERCENT FOR ADULTS \*23,36\*. LIFE EXPECTANCY IS NEAR 4 YEARS \*23\*. THEY DO NOT BREED UNTIL AT LEAST 2 YEARS OLD \*23\*. FLEDGING SUCCESS REQUIRED TO MAINTAIN WILD POPULATION IS 1.3 TO 1.7 YOUNG PER ADULT PAIR \*23\*.

### Life History

Origin: Native to NM

Breeding/Spawning Season: April

Breeding/Spawning Season: May

Breeding/Spawning Season: June

Gestation/Incubation Period: 1-2 months (29-60 days)

Gestation/Incubation Period: Specified in Comments

Reproduction: Oviparous (egg laying)

Nest/Den period: 1-2 months  
 Offspring per Reproductive Effort: 2  
 Offspring per Reproductive Effort: 3-4  
 Offspring per Reproductive Effort: Specified in comments  
 Sexual Maturity: 3-5 years  
 Sexual Maturity: Specified in Comments  
 Mating System (Per season): Monogamy (one mate)  
 Length of Pair Bond: Pair for life  
 Birthing/Egg Laying Site: Snag  
 Birthing/Egg Laying Site: Depression/Scrape  
 Birthing/Egg Laying Site: Man-made structure  
 Birthing/Egg Laying Site: Ledges / Cliffs  
 Birthing/Egg Laying Site: Specified in Comments  
 Nest Materials: No nest structure  
 Nest Materials: Organic debris  
 Nest Materials: Specified in Comments  
 Foraging Strategy: Stooping  
 Foraging Strategy: Specified in Comments  
 Foraging Sites: Air  
 Perch/Roost/Rest Site: Snags  
 Major Mortality Factors: Hunting, crippling  
 Major Mortality Factors: Illegal collecting  
 Major Mortality Factors: Physiological stress  
 Major Mortality Factors: Specified in Comments

### References for Life History Codes

01, 23, 26, 27, 28, 29, 31, 35, 38, 42, 67, 72, 109, 115, 118

### Comments on Life History Codes

+1199+ INCUBATION PERIOD-28-35 DAYS \*29,31\*. +3799+ They nest in cliff recesses in open country, mountain parklands, or along seacoasts, and also on building ledges in large cities \*67\*. +2199+ Typically, three or four eggs are laid in a clutch \*72\*. +2999+ Peregrines begin reproducing at three years of age \*72\*. +3799+ These birds have successfully nested on skyscrapers \*72\*. +5599+ Peregrines take prey by diving and punching - breaking the back or neck of the prey animal \*72\*. +7599+ Reproductive failure due to pesticide exposure and ingestion has been the major factor leading to the decline of peregrine populations \*72\*. In New Mexico, *F.p.anatum* breeds locally in mountain areas and migrates essentially statewide \*\* Perigrene falcon uses snags for nesting and perching \*109\*.

### Species Relationship

### Species Association

### References

### Comments on Species Association

## Management Practices

Result	Management Action
--------	-------------------

Adverse	Chemical; Pesticides & organic chem.; general
Adverse	Chemical; Insecticides, general
Adverse	Wind turbines/generators
Beneficial	Wildl. Mgt; restrict disturbance of habitat
Comment	Habitat; terrestrial snags
Comment	Veg Mgt; Fire, prescribed & natural burns
Comment	ANIMAL DAMAGE CONTROL (ADC) Non-Chemical
Comment	ADC: Leghold traps
Comment	CHEMICALS
Comment	Chemical; Mirex (CHR #1)
Comment	Chemical; Polychlorinated Biphenyls (PCB, DDT; CHR #7)
Comment	Chemical; Mercury (CHR #10)
Comment	Chemical; Lead (CHR #14)
Comment	Chemical; Chlordane (CHR #21)
Comment	Chemical; Zinc (CHR #26)

**References/Result****Reference Numbers**

Adverse	23, 32, 38, 138
Beneficial	23, 35, 38, 72
Comment	97, 109, 110, 111, 135

**Comments on Management Practices**

1996: In California, Longhurst reported a greater diversity of bird species in young stands of chaparral regrowth (2-3 years old) or in chaparral interspersed with grassy openings than in stands that were older than 5 years. Frequent burning creates a mosaic of habitats and maintains abundant prey for peregrine falcons. Because peregrine falcons require open areas for hunting, fires that create these open areas would probably be beneficial, provided burning led to an increase of prey species. Nicholas and Menke reported that fires near nesting cliffs could disturb peregrine young or nesting pairs (Prescribed Fire and Fire Effects Research Work Unit, 1996) \*135\*.

**Comments on Animal Damage Control Methods**

NOTE: The BISON-M coding of potential impacts of ADC practices (e.g., M-44's, traps, snares and poisons) in the "RESULTS MANAGEMENT PRACTICES" (MGT.FIELD & MGT fields) section, assumes the practice occurs in occupied habitat and is applied without mitigation. For more information, contact Jon Klingel, Conservation Services Division, NM Dept of Game and Fish. Santa Fe, NM. ADC reports occasional taking of Hawks or Falcons using leghold traps (ADC 1993,1994,1995)\*110\* and (Robinson, 1943)\*111\*.

**Comments on Recommended Management Practices**

1995 -- The prohibition on take of peregrines for falconry should remain in place in New Mexico. The Department, should continue to systematically monitor the breeding population for occupancy and productivity and continue to work with land management agencies to identify and protect suitable habitat \*89\*(NMDGF, 9/95). USFWS Contaminant Hazard Review (CHR) series mentions this species. Refer to this CHR series for information regarding the effects of the chemical(s) coded in this account(Eisler,1995)\*97\*. 1996, Biologist's Recommendation: The

NMDGF should continue to work cooperatively with other agencies to systematically monitor the breeding population for occupancy and productivity, and continue to work with land management agencies to identify and protect suitable breeding habitat (NMDGF, 1996)\*98\*.

### Comments on Population Status

Habitat alteration or destruction, disturbance, and taking have also made inroads on the species in the state. With today's reduced breeding population, even the loss of a single eyrie or brood could be a setback to the recovery of the species in the area \*38\*. The major need is to maintain or restore suitable habitat for the species, especially for breeding birds (Hubbard 1985). Besides protecting the habitat per se, there is also a need to reduce pesticide contamination in the prey base in Latin America. In addition, the sanctity of breeding territories needs to be guaranteed, so that falcons continue to use them in a productive manner \*38\*. Since 1974, experimental releases of young, primarily through hacking and captive breeding, have increased peregrine numbers in the West, and in 1987, the known number of pairs was nearly 200 (Platt and Enderson 1987) \*67\*. Banning the use of DDT has improved the nesting success of wild peregrine falcons. The recovery plan was revised in 1984. Much of the recovery progress is due to captive breeding and reintroductions \*72\*. Principal to the recovery of the species are continued measuring of pesticide levels and monitoring of nesting success. Much of the recent progress in peregrine recovery is due to captive breeding and reintroductions \*72\*. Banning the use of DDT has improved the nesting success of wild peregrine falcons. The recovery plan was revised in 1984. Much of the recovery progress is due to captive breeding and reintroductions \*72\*. In the last decade, sizable peregrine populations have been discovered in Arizona and elsewhere in the southwestern U.S. (Porter et al. 1978; Ellis in Cade et al. 1988) (Ellis et al. 1989) \*78\*. A reproductive rate considered sufficient to sustain a peregrine population is 1.0 young fledged per attempt (Ratcliffe 1980:241). The Arizona population produced 2.1 young/attempt for 25 breeding attempts for which we have eggshell data and 1.7 young/attempt for 126 attempts from 1976-85 (Ellis in Cade et al. 1988). Average shell thinning for the Arizona population (14.2%) was somewhat below the critical level of 17-20% which has been associated with population declines (Peakall and Kiff in Cade et al. 1988). Within our sample no correlations between shell thickness and productivity were observed, nor were there significant temporal or geographic trends. We believe that these data demonstrate that substantial, but not productivity-limiting, shell thinning has occurred in the Arizona population. Peregrine falcon eggs from Colorado and New Mexico contained 8 to 65 ppm DDE (ca 34 to 280 ppm dry weight) and averaged 23 ppm (ca 100 ppm dry weight) during 1973-79 (Enderson et al. 1982) (Ellis et al. 1989) \*78\*. We found high DDE levels in white-throated swifts (*Aeronautes saxatalis*), the most important prey species for the peregrine in Arizona (Ellis unpubl. data). It has been shown experimentally that exposure to DDE in the diet caused wild prairie falcons (*Falco mexicanus*) to produce thin-shelled eggs (Enderson and Wrege 1973). Captive eastern screech owls (*Otus asio*) and American kestrels (*Falco sparverius*) fed 2.8 ppm DDE (wet basis) laid eggs 10-13% thinner than controls (Wiemeyer and Porter 1970; McLane and Hall 1972). Lincer (1975) demonstrated a dose-dependent relation of DDE-induced eggshell thinning in the American kestrel. If peregrines respond similarly, then five of the prey species in Table 3 could pose a significant threat to the peregrine. However, only one of these is taken frequently (Ellis et al., 1989) \*78\*. Of the prey species tested, migratory shorebirds were usually the most contaminated, followed by migratory insectivores. Nonmigratory species typically had low contaminant levels except nonmigrants in known DDE "hot spots" including western Texas, southeastern new Mexico, and south-central Arizona (Clark and Krynitsky 1983) (Ellis et al., 1989) \*78\*. Ducks fed Kelthane, a miticide containing p,p'-dicofol as its principal component and minor amounts of Chloro-DDT, exhibited elevated DDE levels (Risebrough et al. 1986). The metabolically formed DDE could have come from Chloro-DDT, but conversion of DDE from dicofol is also possible. Kelthane is used in cotton and citrus growing areas of the Southwest (Ellis et al., 1989) \*78\*. 1995/1996, Threats: Chemical contamination of the environment remains a threat, as new compounds are developed and applied to the land. In New Mexico, disturbance of nesting pairs is a principal threat (NMDGF, 1995) \*89\*; (NMDGF, 1996) \*98\*. 1996, Threat: The continued use of old chemical compounds also remains a threat to these falcons (NMDGF, 1996) \*98\*. 1997: Environmental contamination, particularly insecticides, could continue to affect reproduction; this study found a strong negative correlation with increased domestic insecticide production and decreased peregrine productivity (Johnson and Williams, 1997) \*107\*. ARIZONA 1996, Threats: There are no known range-wide threats to the peregrine falcon. However, individual eyries are subject to disturbance by recreationists; contaminants may be a problem on the wintering grounds in Central and South America. Effects of

pesticides appear to have decreased north of Mexico (AGFD, 1996) \*101\*.

## References

BAND United States Department of the Interior. Fish and Wildlife Service.  
Office of Migratory Bird Management, Laurel, Maryland 20708. (\* number  
= refers to the number of routes x number of years the bird was  
observed in the county for that season). Data collection started 1908  
for game birds and 1954 for non-game birds.

### Colorado Bibliography:

- 01 BAILEY, A.M. AND R.J. NIEDRACH. 1965. BIRDS OF COLORADO. DENVER MU  
NAT. HIST. 2 VOL. 895P.
- 02 AMERICAN ORNITHOLOGISTS UNION. 1957. CHECK-LIST OF NORTH AMERICAN  
BIRDS. PORT CITY PRESS, INC. BALTIMORE. 691PP.
- 03 UNITED STATES DEPARTMENT OF STATE 1937. PROTECTION OF MIGRATORY  
BIRDS AND GAME MAMMALS. U.S. GOV. PRINTING OFFICE TREATY SERIES NO.  
912. WASHINGTON, D.C. 6PP.
- 04 COLO. DIV. OF WILDL. 1977. TODAY'S STRATEGY... TOMORROW'S WILDLIFE.  
COLO. DIV. OF WILDL. DOW-G-I-34(R)-77 SECOND EDITION.
- 05 ANDREWS, R. 1975. FALL MIGRATION-1975. CFO JOURNAL 26-7-16.
- 06 ANDREWS, R. 1976. THE WINTER SEASON, DEC1, 1975-MAR 31, 1976 CFO  
JOURNAL 27-23-27.
- 07 ANDREWS, R. 1976. SPRING MIGRATION 1976. CFO JOURNAL 28-12-16.
- 08 DAVIS, W.A. 1971. COMMENTS ON THE CHRISTMAS COUNTS. CFO NEWSLETTER  
3-2-7.
- 09 ANNON. 1971. UNUSUAL SITINGS. CFO NEWSLETTER 4-3.
- 10 HUTCHINSON, D. 1977. A SUMMARY OF 1976 COLORADO CHRISTMAS BIRD  
COUNTS. CFO JOURNAL. 29-11-13
- 11 MOULTON, P. 1977. THE FALL MIGRATION-1976. CFO JOURNAL. 30-5-14.
- 12 MOULTON, P. 1977. WINTER SEASON-1976-1977. CFO JOURNAL. 31-5-12.
- 13 ANDREWS, R. 1978 SPRING SEASON-1977. CFO JOURNAL 32-5-10.
- 14 HUTCHINSON, D. 1978. A SUMMARY OF 1977 COLORADO CHRISTMAS COUNTS.  
CFO JOURNAL. 32-22-24.
- 15 MOULTON, P. 1978. THE FALL MIGRATION-1977. CFO JOURNAL 34-3-6.
- 16 ANNON. 1971. MORE 1970 CHRISTMAS COUNTS. CFO NEWSLETTER 4-5-8.
- 17 HADLEY, N.F. 1965. CHECKLIST OF NESTING BIRDS. UNIV. COLO. INST.  
ARCTIC AND ALPINE RES.
- 18 HOLT, H.R. 1969. STATUS AND MIGRATION DATA OF BIRDS OF THE DENVER  
AREA. DENVER FIELD ORNITH. DENVER MUS. NAT. HIST. DENVER. 20PP.
- 19 HEILBRUN, L.H. 1977. THE SEVENTY-SEVENTH AUDUBON CHRISTMAS BIRD COUNT  
AMERICAN BIRDS 31(4)-391-916.
- 20 HEILBRUN, L.H. 1978. THE SEVENTY-EIGHT AUDUBON CHRISTMAS BIRD COUNT.  
AMERICAN BIRDS. 32(4)-415-933.
- 21 ANNON. 1975. THE SEVENTY-FIFTH AUDUBON CHRISTMAS BIRD COUNT. AMER.  
BIRDS 29-151-621.
- 22 KINGERY, H.E. 1979. MOUNTAIN WEST-THE NESTING SEASON. AMER. BIRDS  
33-883-886.
- 23 CRAIG, G.R. 1977. AMERICAN PEREGRINE FALCON RECOVERY PLAN (ROCKY MT.  
SOUTHWEST POPULATION) U.S.F.W.S. 183PP.
- 24 CRAIG, G.R., AND J.H. ENDERSON. 1981. NESTING PERFORMANCE OF  
PEREGRINE FALCONS IN COLORADO. PAGES 12-23 IN WILDL. RES. REP., JAN.  
1981. COLO. DIV. WILDL.
- 25 CRAIG, G.R. 1981. PERS. COMM.
- 26 ENDERSON, J.H., AND G.R. CRAIG. 1979. PHYSICAL AND BIOLOGICAL  
ANALYSIS OF COLORADO NESTING HABITAT. PAGES 138-162 IN WILDL. RES.  
REP., JAN. 1979. COLO. DIV. WILDL.

- 27 COLO. DIV. WILDL. 1978. ESSENTIAL HABITAT FOR THREATENED OR ENDANGERED WILDLIFE IN COLORADO. COLO. DEP. NAT. RES. 84PP.
- 28 U.S.D.A. FOREST SERVICE WILDLIFE AND FISH HABITAT RELATIONSHIPS MATRICES. U.S. FOR. SERV., REG, 2, DENVER. 4PP.
- 29 SNOW, C. 1972. HABITAT MANAGEMENT SERIES FOR ENDANGERED SPECIES U.S. DEP. INTERIOR BLM REPORT NO. 1 35PP.
- 30 PERSONAL COMMUNICATION WITH REFUGE OR MONUMENT OR PARK PERSONNEL.
- 31 NATURAL HERITAGE INVENTORY, COLO. NAT. AREAS PROG. 1981. ELEMENT ABSTRACT FOR FALCO PEREGRINUS ANATUM. DEPT. NAT. RES., DENVER 5PP.
- 32 ENDERSON, J.H. AND J.CRAIG. 1974. STATUS OF THE PEREGRINE FALCON IN THE ROCKY MOUNTAINS IN 1973. AUK 91-727-736.
- 33 RATCLIFFE, D. 1980. THE PEREGRINE FALCON. BUTEO BOOKS VERMILLION SOUTH DAKOTA 416PP.
- 34 ENDERSON, J.E. 1965. A BREEDING AND MIGRATION SURVEY OF THE PEREGRINE FALCON. WILSON BULL. 77-327-339.
- 35 CRAIG, G.R. 1980. REINTRODUCTION AND AUGMENTATION OF PEREGRINE FALCON REPRODUCTION. PAGES 25-32 IN WILDL. RES. REP., JAN. 1980-PART ONE. COLO. DIV. WILDL.
- 36 ENDERSON, J.H. 1969. PEREGRINE AND PRAIRIE FALCON LIFE TABLES BASED ON BAND RECOVERY DATA IN HICKEY, J.J. (ED.) PEREGRINE FALCON POPULATIONS. UN. WISC. PRESS. MADISON.
- 37 KINGERY, H.E., AND W.D. GRAUL. (ED.). 1978. COLORADO BIRD DISTRIBUTION LATILONG STUDY. COLO. FIELD ORNITH. 58PP.

#### New Mexico:

Bibliography: A.O.U. 1983. Check-list of North American birds. Amer. Orn. Union. Lawrence, KS; Brown, L. and D. Amadon. 1968. Eagles, hawks, and falcons of the world. McGraw-Hill Book Co., New York, NY; Friedmann, H. 1950. The birds of North and Middle America. Part 11. U.S. Nat. Mus. Bull. 50:650-665; Hickey, J.J. and D.W. Anderson. 1968. Chlorinated hydrocarbons and eggshell changes in raptors and fish-eating birds. Science 162:271-273; Hubbard, J.P. 1978. Revised check-list of the birds of New Mexico. New Mex. Orn. Soc. Publ. 6; Hubbard, J.P. 1985. Peregrine falcon (*Falco peregrinus*). New Mex. Dept. Game and Fish, Handbook Spec. End. in New Mexico: BIRD/FA/FA/PE:1-2; White, C. 1968. Diagnosis and relationships of the North American tundra-inhabiting peregrine falcons. Auk 85:179-191. \*38\*

- 38 New Mexico Department of Game and Fish (Santa Fe, NM 87503). 1988. Handbook of Species Endangered in New Mexico, F-201:1-2.
- 39 New Mexico Department of Game and Fish-State Game Commission. 1990. Amended listing of endangered wildlife of New Mexico, Regulation No. 682, November 30, 1990.
- 40 United States Forest Service. 1990. Regional forester's sensitive species list, Coronado National Forest, Southwest Region--Region 3, September 1990.
- 41 Title 50 Code of Federal Regulations, Subchapter B., Part 10.13: List of Migratory Birds. U.S. Government Printing Office: 1985 0-488-794. (Lists all species of migratory birds protected by the Migratory Bird Treaty Act (16 U.S.C. 703-711)).
- 42 Hubbard, J.P. 1978. Revised checklist of the birds of New Mexico. New Mexico Ornithological Society Publication No. 6.
- 43 U.S. Fish and Wildlife Service. 1987. Endangered and threatened species of Arizona and New Mexico 1987 (with 1988 addendum). U.S. Fish and Wildlife Service. Pp. 11-12.
- 44 U.S. Dept. of Agric. Forest Service. 1990. Regional forester's sensitive species list southwest region--region 3, Sept. 1990.
- 45 American Ornithology Union. 1982. Thirty-fourth Supplement to the American Ornithologists' Union check-list of North American Birds. Supplement to the Auk. Vol. 99, No. 3, July 1982.

- 46 Terres, J.K.. 1982. The Audubon Society Encyclopedia of North American Birds. Alfred A. Knopf, Inc. 1109pp. pg 92.
- 47 New Mexico Department of Game and Fish Endangered Species Program. 1990. Checklist of the Native Birds of New Mexico. Santa Fe, New Mexico 87503. June 30, 1990.
- 48 New Mexico Statutes Annotated Chapter 17, Game and Fish, Pamphlet # 33, 1988, Replacement pamphlet 17-2-3. Protected wildlife species and game fish defined. Michie Co. Law Publishers, Charlottesville, VA.
- 49 Endangered and Threatened Wildlife and Plants. April 15, 1990. 50 CFR 17.11 and 17.12. US Fish and Wildlife Service, US Department of the Interior.
- 50 Southwest Parks and Monuments Association. 1986. A checklist of the birds of Bandelier National Monument. Tucson, Arizona.
- 51 U.S. Fish and Wildlife Service. 1968. Birds of the San Andres National Wildlife Refuge. Refuge Leaflet 122-R3. January 1968.
- 52 U.S. Fish and Wildlife Service. 1990. Birds -Bosque del Apache National Wildlife Refuge (Checklist).
- 53 Teuber, Ross L. 1990. Sevilleta National Wildlife Refuge Bird List. Updated as of 1-30-90.
- 54 US Fish and Wildlife Service. 1988. Birds- Las Vegas National Wildlife Refuge (Checklist). July 1988.
- 55 West, Steve. 1988. Birds - A checklist for Carlsbad Caverns National Park, Carlsbad Caverns Natural History Association, Carlsbad, New Mexico.
- 56 U.S. Fish and Wildlife Service. 1989. Bitter Lake National Wildlife Refuge- Bird List. Revised April 1989.
- 57 U.S. Fish and Wildlife Service. 1991. Maxwell National Wildlife Refuge Bird List.
- 58 Baltosser, Wm. H. 1991. Avifauna of the Bernardo and La Joya State Wildlife Refuges. New Mexico Department of Game and Fish.
- 59 Endangered and Threatened Wildlife and Plants. July 15, 1991. 50 CFR 17.11 and 17.12. US Fish and Wildlife Service, US Department of the Interior.
- 60 Storch, D. 1991. Birds of the Sangre de Cristo Mountains: A Checklist. Camino Real and Questa Ranger Districts, Carson National Forest.
- 61 Zimmerman, D., R. Fisher, P. Boucher, and B. Anderson. 1991. Birds of the Gila National Forest: A Checklist. Prepared by the USDA Forest Service in cooperation with the Southwest New Mexico Audubon Society.
- 62 Smartt, Richard. 1980. Wildlife Support Document McGregor Range Grazing Environmental Impact Statement. Bureau of Land Management, Las Cruces, New Mexico 88001. 40 pp.
- 63 IHICS \* Bureau of Land Management Integrated Habitat Inventory Classification System (database). Last Update August 1992. Contact: Andy Dimas, Biologist, NM State Office BLM, Albuquerque, NM (505) 438-7422.
- 64 New Mexico Eco. Serv. Office. 1992. Federally listed and candidate plant and animal species-county list for New Mexico. October 27, 1992.
- 65 Needs Assessment: Monitoring Neotropical Migratory Birds. July 18, 1992. Prepared by participants at the Monitoring Working Group Meeting, Arlington, Virginia. September 4,5, 1991.
- 66 Preliminary list of neotropical migratory forest and grassland birds that use prairie and savanna habitats for breeding or foraging. Heather Willams, NFWF. Annotated list was compiled from information cited in Erlich, Dobkin, and Wheye, The Birder's Handbook: A Field Guide to the Natural History of North American Birds, New York: Simon and Schuster 1988; Preliminary List of Migrants for Partners in Flight Neotropical Migratory Bird Program. (PIF Newsletter, Vol.2, No. 1).
- 67 Finch, Deborah M. August 1992. Threatened, Endangered, and Vulnerable Species of Terrestrial Vertebrates in the Rocky Mountain Region. USDA Forest Service General Technical Report RM-215.
- 68 Biological Inventory Zuni Project McKinley County, New Mexico. U.S.

- Fish and Wildlife Service Department of Interior. May 1980. 105pp.
- 69 Forest and Rangeland Birds of the United States, Natural History and Habitat Use 1991. U.S. Department of Agriculture, Forest Service Agricultural Handbook 688. 625 pages.
- 70 Arizona Game and Fish Department. 1988. Threatened native wildlife in Arizona. Arizona Game and Fish Department Publication. Phoenix, Arizona. 32 pp.
- 71 Personal Communication with Wes Johnson, UWIN Program Manager -- September 13, 1993. State of Utah, Department of Natural Resources, Division of Wildlife Resources. 1596 West North Temple, Salt Lake City, Utah, 84116-3195; phone: (801) 538-4700.
- 72 Endangered and Threatened Species of Oklahoma. Oklahoma Cooperative Extension Service, Oklahoma State University, et. al, April, 1993.
- 73 Endangered and Threatened Wildlife and Plants. August 23, 1993. 50 CFR 17.11 and 17.12. US Fish and Wildlife Service, US Department of the Interior.
- 74 Texas Parks and Wildlife Department. 1993. Texas threatened and endangered species. Texas Parks and Wildlife Publication. Austin, Texas. 9pp.
- 75 Ministry of Social Development (formerly the Ministry of Development and Ecology) in Mexico, Official Database published May 17, 1991, as "Ecological Criteria CT-CERN-001-91."
- 76 White Sands National Monument: Checklist of Birds. From John Mangineli. Received 9/29/93.
- 77 Williams, Sartor O. III. Preliminary Listing And Status Assessment Of Neotropical Migrant Birds In New Mexico. Revised 22 July 1993. New Mexico Depart. of Game and Fish, Santa Fe, NM 87504.
- 78 Ellis, D.H. et al., 1989. Pesticide Residues in Arizona Peregrine Falcon Eggs and Prey. In: Bulletin of Environmental Contamination and Toxicology. Issue 42:57-64.
- 79 Endangered and Threatened Wildlife and Plants. August 20, 1994. 50 CFR 17.11 and 17.12. US Fish and Wildlife Service, US Department of the Interior.
- 80 Patton, D. 1994. R3HARE Database. Northern Arizona University. Dept. of Forest Science. Flagstaff, AZ.
- 81 Klingel, Jon T. Biologist, (May, 1995). Personal Observation. Conservation Services Division, New Mexico Department of Game and Fish. Santa Fe, New Mexico.
- 82 Ward, Laurie Z. and Richard L. Glinski. 1994. Peregrine Falcon Management in Arizona. In: Abstracts From Presentations at Arizona/New Mexico Chapters of The Wildlife Society, Sierra Vista, AZ. February 4 and 5, 1994.
- 83 Navajo Endangered Species List (NESL): including Endangered Species Act Status, Migratory Bird Treaty Act Status, and Bald Eagle Act Status. NESL statuses revised 14 February, 1994; U.S. Endangered Species Act statuses revised 27 February, 1995.
- 84 U.S. Department of the Interior (USFWS). CITES: Appendices I, II, and III to the Convention on International Trade in Endangered Species of Wild Fauna and Flora. September 30, 1992.
- 85 Arizona Game and Fish Department. (February, 1995). Status Designations Notebook. Heritage Data Management System (HDMS). Phoenix, AZ.
- 86 Colorado Division of Wildlife. 1989. Wildlife in Danger. The Status of Colorado's Threatened or Endangered Fish, Amphibians, Birds, and Mammals. Department of Natural Resources. Denver, CO.
- 87 Hubbard, John P. 1987. The Vegetative Communities and Vertebrate Fauna of the Gray Ranch, Hidalgo County, New Mexico. Endangered Species Program, New Mexico Dept. of Game and Fish, Santa Fe, NM 87503.
- 88 New Mexico Ornithological Society. March, 1995. Field Checklist of New Mexico Birds. New Mexico Ornithological Society. Refer questions to the New Mexico Dept. of Game and Fish. Santa Fe, NM.

- 89 New Mexico Department of Game and Fish. September, 1995. Recommended Changes: List of Endangered Species in New Mexico. pp. 1-12.
- 90 Stahlecker, Dale W. August 25, 1995. Birds of Santa Rosa Reservoir, Guadalupe County, New Mexico. Eagle Environmental, Inc. Santa Fe, NM 87505.
- 91 Williams, Dr. Sartor O. III. November, 1995. Endangered Species Biologist. Personal Communication. New Mexico Department of Game and Fish. Santa Fe. New Mexico.
- 92 Stahlecker, Dale W. September, 1995. Eagle Ecological Services. 30 Fonda Road, Santa Fe, NM. Personal Communication.
- 93 Mehlman, David. August, 1995. Biology Department, University of New Mexico. Albuquerque, NM. Personal Communication.
- 94 Arizona Game and Fish Department. November 9, 1995. Recovery Plans and Conservation Agreements for Listed and Candidate Species in Arizona. Heritage Data Management System (HDMS). Phoenix, AZ.
- 95 New Mexico Department of Game and Fish, 1994. Endangered Species of New Mexico -- 1994 Biennial Review and Recommendations. Authority: New Mexico Wildlife Conservation Act (NMSA 17-2-37, 1978).
- 96 Sandoval, Andrew V. 1996. NMDGF, Biologist. New Mexico Wildlife Non-English Language Common Names -- Language: Spanish. NMDGF, Santa Fe.
- 97 Eisler, Ronald. October, 1995. DRAFT of Contaminant Hazard Reviews, Report 34.
- 98 New Mexico Department of Game and Fish, Spring 1996. Threatened and Endangered Species of New Mexico -- 1996 Biennial Review and Recommendations. Authority: Wildlife Conservation Act (NMSA 17-2-37 through 17-2-46, 1978).
- 99 Colorado Natural Heritage Program. 1996. Colorado's Natural Heritage: Rare and Imperiled Animals, Plants, and Natural Communities. Vol. 2, Number 1 (April 1996).
- 100 Klingel, Jon T. July, 1996. Biologist. Conservation Services Division. New Mexico Department of Game and Fish. Santa Fe, New Mexico.
- 101 Arizona Game and Fish Department. March 16, 1996. Wildlife of Special Concern in Arizona (Public Review DRAFT). Phoenix, AZ, 85023-4399.
- 102 Hinojosa, Hector. 1996. A Compilation of Plant and Animal Species for LANL and Surrounding Areas, DRAFT. LA-UR-96-2490. Los Alamos National Laboratory (LANL). Los Alamos, NM.
- 103 New Mexico Natural Heritage Database. October, 1996. List of Species of New Mexico with NHP "Tracked" Status.
- 104 New Mexico Department of Game and Fish. 31 January 1996. Threatened and Endangered Species of New Mexico -- 1996 Biennial Review and Recommendations. Authority: Wildlife Conservation Act (NMSA 17-2-37 through 17-2-46, 1978).
- 105 Kamees, Larry and Doug Burkett. November, 1996. A Checklist of Birds for White Sands Missile Range New Mexico (Updated).
- 106 Arizona Game and Fish Department. June, 1996. Natural Heritage Program. Phoenix, AZ.
- 107 Johnson, Terrell H., and Sartor O. Williams III. 1997. Declining Trends in Peregrine Falcon Productivity in New Mexico: Implications for Status Assessment. In Abstracts of the 30th Joint Annual Meeting of The Wildlife Society, New Mexico and Arizona Chapters, and American Fisheries Society, Arizona-New Mexico Chapter. Feb., 1997.
- 108 Schwarz, Hart R. September, 1995. Birds of the Sandia and Manzanita Mountains (Checklist). Sandia Ranger District, Cibola National Forest. USDA Forest Service.
- 109 Scott, V.E., K.E. Evans, D.R. Patton and C.P. Stone. November, 1977. Cavity-Nesting Birds of North American Forests. USDA Forest Service Agriculture Handbook 511. U.S. Government Printing Office, Washington D.C.
- 110 ADC National Annual Report for fiscal year 1993, 1994 and 1995.
- 111 Robinson, Weldon B. 1943. The "Humane Coyote-Getter" vs. the Steel Trap

- in Control of Predatory Animals. J. of Wildlife Management. 7(2):179-189.
- 112 Reeves, Tim, 1996. Birds of the B-Square Ranch, A Guide to Noteworthy Species. San Juan College, New Mexico.
- 113 USDA Forest Service (USFS). Sept. 1995. Birds of Lincoln County: A Checklist. Lincoln National Forest. Alamogordo, NM. 88310-6992.
- 114 NM Department of Game and Fish. January 31, 1996. List of Threatened and Endangered Species. Title 19 New Mexico Administrative Code Chapter 33 Part 1 (19 NMAC 33.1).
- 115 Williams, Sartor O.III. Sept. 1997. Endangered Species Biologist. New Mexico Department of Game and Fish. Santa Fe, NM. Pers. Communication.
- 116 Schmitt, Carl G. 1976. Summer Birds of the San Juan Valley, NM. NM Ornithological Society Publication No. 4.
- 117 Colorado Natural Heritage Program. Last updated August 19, 1996. Rare and Imperiled Wildlife of Colorado. Download from Internet Dec. 16, 1997. <http://www.colostate.edu/Orgs/CNHP/>
- 118 Haynes, Lisa and Susan Schuetze. September, 1997. A Sampler of Arizona's Threatened and Endangered Wildlife. A Cooperative Project between Arizona Game and Fish Department and Arizona Department of Agriculture.
- 119 NM Natural Heritage Program (NMNHP). October, 1997. New Mexico Heritage State Ranks 10/97. Albuquerque, NM.
- 120 Altenbach, Marilyn. April 1, 1998. NMNHP. Univers. of New Mexico, Albuquerque, NM. Personal Communication.
- 121 Travis, James R. October 1992. Atlas of the Breeding Birds of Los Alamos County, New Mexico. Los Alamos National Laboratory, Los Alamos, NM 87545.
- 122 Utah Division of Wildlife Resources. March, 1997. Utah Sensitive Species List. Download from Internet Dec. 15, 1997. Approved by John F. Kimball Director. March 20, 1997. <http://www.nr.state.ut.us/dwr/sensppl.html>
- 123 Zimmerman, Dale A. April, 1995. Birds of the Gila National Forest: A Checklist. Prepared by the USDA Forest Service in cooperation with the Southwest New Mexico Audubon Society.
- 124 Conservation Division, Fort Bliss Directorate of Environment, 1995. Checklist of Birds, Fort Bliss, Texas [and New Mexico]. For further information contact the Wildlife Management Team, Directorate of Environment, at (951) 568-3016/3018
- 125 USFS. 1995. Birds of the Sacramento Mountains, Lincoln National Forest. Prepared by the US Forest Service, Southwestern Region. USDA.
- 126 Hveregaard, G.T. 1989. A checklist of the birds of El Malpais National Monument a Conservation Area. Southwest Parks and Monuments Association. Unpaginated. <http://www.npwrc.usgs.gov/resource/othrdata/chekbird/r2/malpais.htm> (Version 22 May 98).
- 127 U.S. Fish and Wildlife Service. 1992. Birds of Sevilleta National Wildlife Refuge. U.S. Fish and Wildlife Service. Unpaginated. <http://www.npwrc.usgs.gov/resource/othrdata/chekbird/r2/sevillet.htm> (Version 22 May 99).
- 128 Stahlecker, Dale W., Jessica V. Jewell, and John P. DeLong. 7 April 1998. Vertebrate Wildlife on the Rio Chama Wildlife and Fishing Area, Rio Arriba County, New Mexico. Eagle Enivornmenal, Inc., Santa Fe, NM and Metric Corporation, Alburquerque, NM.
- 129 Bryan, K. et al. 1995. A Checklist of Texas Birds. Technical Series No. 32. Texas Parks and Wildlife, Natural Resource Program. Austin, Texas.
- 130 Williams, S.O. 1 September 1997. Checklist of New Mexico Bird Species. From NMOS Bulletin: New Mexico Ornithological Society 25(3):51-66, 1997.
- 131 Steadman, David W. 9 August 1981. National Museum of Natural History-Smithsonian Institution. New Mexico Department of Game and Fish. Sante Fe, New Mexico.
- 132 Federal Register. Endangered and Threatened Wildlife and Plants; Final Rule to Remove the American Peregrine Falcon from the Federal List of Endangered and Threatened Wildlife and to Remove the Similarity of

- Appearance Provision for Free-Flying Peregrines in the Conterminous United States; Final Rule. Department of the Interior. Wednesday, August 25, 1999. Vol. 64, No. 164.
- 133 Mesilla Valley Audubon Society. May 1996. Checklist of Birds Holloman Airforce Base. Refer questions to the CEV Office at (505) 475-3931. Holloman AFB, New Mexico.
  - 134 Northern Arizona Audubon Society. June 1999. Checklist of the Birds: Mormon Lake Arizona & nearby areas (Lake Mary & Ashurst, Anderson Mesa). Compiled by Elaine Morrell and John Coons.
  - 135 Fire Effects Information System [Online] (1996, September). Prescribed Fire and Fire Effects Research Work Unit, Rocky Mountain Research Station (producer). Available: [www.fs.fed.us/database/feis/](http://www.fs.fed.us/database/feis/) [1998, March 12]
  - 136 Neotropical Migrant Birds in Region 3 - Status of Knowledge in 1991. A Seminar presented by SWCA, Inc. to the U.S. Forest Service in October and November, 1991.
  - 137 Watson, Mike. Fall, 2000. New Mexico Department of Game and Fish, Santa Fe, NM. Personal Communication.
  - 138 Association of Bay Area Governments. 1987. Small but powerful: a review guide to small alternative energy projects for California local decisions. Oakland, CA. 66 pp.
  - 139 Johnson T. J. 2001. The peregrine falcon in New Mexico-2001. Report to New Mexico Department of Game and Fish, Santa Fe. 17p.

#### RUNWILD Bibliography

- 1  
LEVY, S.H. 1977. PERSONAL OBSERVATION.
- 2  
LIGON, J.S. 1961. NEW MEXICO BIRDS. UNIV. OF NEW MEX. PRESS, ALBUQUERQUE.
- 3  
PHILLIPS, A., J. MARSHALL, AND G. MONSON. 1964. THE BIRDS OF ARIZONA. UNIV. OF ARIZ. PRESS, TUCSON. 212 PP.
- 4  
HUBBARD, J.P. 1978. CHECKLIST OF THE BIRDS OF NEW MEXICO. NEW MEXICO ORNITH. SOC. PUBL. NO. 6.
- 5  
THE BIRD RESEARCH FOUND.
- 6  
MAY, J.B. 1935. THE HAWKS OF NORTH AMERICA. NAT. ASSOC. OF AUDUBON SOC.
- 7  
ANON. 1973. RAPTOR RESEARCH BY THE BUREAU OF SPORT FISHERIES AND WILDLIFE. RAPTOR RESEARCH 7(1):17-21.
- 8  
BALDA, RUSSELL P. 1967. ECOLOGICAL RELATIONSHIPS OF THE BREEDING BIRDS OF THE CHIRICAHUA MOUNTAINS, AZ. PH. D. THESIS, UNIV. OF ILLINOIS.
- 9  
BENT, ARTHUR C. 1938 (1961). LIFE HISTORIES OF NORTH AMERICAN BIRDS OF PREY. DOVER PUBLICATIONS, NEW YORK.
- 10  
BOND, FRANK M. 1972. THE PEREGRINE, PRAIRIE AND APLOMADO FALCONS IN THE SOUTHWEST. IN:

SYMPOSIUM ON RARE AND ENDANGERED WILDLIFE OF  
THE SOUTHWESTERN UNITED STATES. NEW MEXICO  
DEPT. OF GAME AND FISH, SANTA FE.

11

CADE, TOM J. AND STANLEY A. TEMPLE. 1977. THE  
CORNELL UNIVERSITY FALCON PROGRAMME. WORLD  
CONFERENCE ON BIRDS OF PREY 1:353-369.

12

CADE, TOM J., CLAYTON M. WHITE, AND JOHN R.  
HAUGH. 1968. PEREGRINES AND PESTICIDES IN  
ALASKA. CONDOR 70:170-178.

13

CALIFORNIA DEPT. OF FISH AND GAME. 1974.  
BIENNIAL REPORT ON THE STATUS OF CALIFORNIA'S  
RARE AND ENDANGERED FISH AND WILDLIFE.  
CALIFORNIA DEPT. OF FISH AND GAME, SACRAMENTO.

14

CAROTHERS, STEVEN W. AND R. R. JOHNSON. 1975.  
RECENT OBSERVATIONS ON THE STATUS AND  
DISTRIBUTION OF SOME BIRDS OF THE GRAND CANYON  
REGION. PLATEAU 47(4):140-153.

15

CRAIG, G. R. 1974. RAPTOR POPULATIONS AND  
CHARACTERISTICS STUDIES. COLORADO DIVISION OF  
WILDLIFE. GAME RESEARCH REPORTS 1974:221-257.

16

ENDERSON, J. 1965. A BREEDING AND MIGRATION  
SURVEY OF THE PEREGRINE FALCON. WILSON BULL.  
77(4):327-339.

17

ENDERSON, JAMES H. AND JERRY CRAIG. 1974.  
STATUS OF THE PEREGRINE FALCON IN THE ROCKY  
MOUNTAINS IN 1973. AUK 91(4):727-736.

18

HAMERSTROM, FREDERICK N. JR., BYRON E. HARRELL  
AND RICHARD R. OLENDORFF, EDS. 1974.  
MANAGEMENT OF RAPTORS: PROC. OF THE CONFERENCE  
ON RAPTOR CONSERVATION TECHNIQUES. FORT  
COLLINS, COLORADO. MARCH 22-24, 1973.

19

HICKEY, J.J., ED. 1969. PEREGRINE FALCON  
POPULATIONS. MADISON, WISC.

20

MARSHALL, JOE T. JR. 1957. BIRDS OF THE  
PINE-OAK WOODLAND IN SOUTHERN ARIZONA AND  
ADJACENT MEXICO. PACIFIC COAST AVIFAUNA NO.  
23, COOPER ORNITHOLOGICAL SOCIETY, BERKELEY,  
CALIFORNIA.

21

PETERSON, ROGER T. 1974. BIRDS. IN:  
PROCEEDINGS OF THE SYMPOSIUM ON ENDANGERED AND  
THREATENED SPECIES OF NORTH AMERICA. JUNE  
11-14, 1974. DEPT. OF THE INTERIOR,  
WASHINGTON, D.C.

22

PETERSON, ROGER T. AND EDWARD L. CHALIF. 1973.  
A FIELD GUIDE TO MEXICAN BIRDS. HOUGHTON  
MIFFLIN CO., BOSTON.

23

PORTER, RICHARD D., CLAYTON M. WHITE AND

ROBERT J. IRWIN. 1973. THE PEREGRINE FALCON IN UTAH, EMPHASIZING ECOLOGY AND COMPETITION WITH THE PRAIRIE FALCON. BRIGHAM YOUNG UNIV. SCI.BULL. BIOL. SERV. 28(1).

24

SCOTT, VIRGIL E., KEITH E. EVANS, DAVID R. PATTON, AND CHARLES P. STONE. 1977. CAVITY-NESTING BIRDS OF NORTH AMERICAN FORESTS. USDA FOR. SERV. AGRIC. HANDBOOK 511. 112 PP.

SPRUNT, ALEXANDER. 1955. NORTH AMERICAN BIRDS OF PREY. HARPER AND BROTHERS, NEW YORK. 227 PP.

26

WHITE, CLAYTON M. 1968. BIOSYSTEMATICS OF THE NORTH AMERICAN PEREGRINE FALCONS. UNPUBL.

27

ARIZONA:HABITAT UTILIZATION AND MANAGEMENT RECOMMENDATIONS. INSTITUTE FOR RAPTOR STUDIES. ORACLE, AZ. 43 P.

28

TERRES, J.K. 1980. THE AUDUBON SOCIETY ENCYCLOPEDIA OF NORTH AMERICAN BIRDS. ALFRED A. KNOPF. 1109PP.

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